

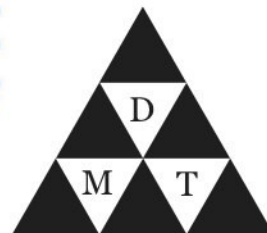
MTI Follow-up Webinar

Addition Progression

Grades K-6

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Suggestions for Usage

This webinar is designed to assist teachers, administrators and instructional coaches in creating a possible progression of addition models for grade K-6. It will provide opportunities for the group to investigate the number sets and models appropriate for various grade levels and discuss potential ways students might progress through those models. The models are aligned with and connections are made to the Common Core State Standards.

Materials Needed

A recording of *Addition Progression: Grades K-6* to project or share with participants.

Addition model cards (1 set for each group of 2-3 participants)

Standards cards (1 set for each group of 2-3 participants)

Poster paper (at least 11x17)

Scissors

Tape or glue

Procedures and Discussions

1. Before viewing the webinar, have teachers solve the following problems in multiple ways. Have participants briefly compare their models with their group. We will return to these problems later in the webinar, so a whole group discussion is not necessary.
 - a. $3+5$
 - b. $38+7$
 - c. $492+263$
 - d. $14.8+13.6$

Begin the Webinar

2. After the comparison between the current Idaho Standards and the Common Core standards, discuss the following:
 - a. Discuss the benefits and limitations of the approach provided by each standard document in relation to (1) student learning and (2) teacher instruction.
3. Building the progression:
 - a. We recommend participants work in groups of 2-3 to build the progression.
 - b. The amount of time necessary to build the progression varies greatly depending upon the size of the group and the amount of discussion. It typically varies from 10-20min.
 - c. Directions from webinar slide:
 - i. The cards detail multiple models for solving the following problems:
 - ii. $3 + 5 = 8$
 - iii. $38 + 7 = 45$

- iv. $492 + 263 = 755$
- v. $14.8 + 13.6 = 28.4$
- vi. Based upon the Common Core State Standards provided, place the cards in the correct grade-level for the **number set** and **model**.
- vii. Within a grade-level initially sort the cards according to enactive, iconic and symbolic representations
- viii. Then depending upon time, examine the models within and between grade-levels for the mental strategies being used to determine the connections between the models and potential progressions of student thinking.
- d. If you have enough participants to build multiple progressions, we highly recommend having the groups compare progressions and discuss the reasoning behind different placements of models.
- e. The section of the webinar addressing the sample progressions (K-1, 2-4, 5-6) can be used to encourage discussion around the progressions built by the participants in comparison to the ones provided.
- 4. When you reach the slide titled “What are the big ideas you’re leaving with?”, pause for a few minutes to allow your group to generate and discuss ideas.

Extensions

If you would like to extend the webinar into amore in depth professional development, here are some suggested extensions.

- 1. Have the group generate contextual problems that would generate the models in the progression.
 - a. For example: Jose has driven 492 miles and still needs to drive 263 miles to get to his destination. How many miles is his total drive? (Using a linear context to generate a number line)
- 2. If you are working as a school or district team, you could discuss the specific models that will be focused on at each grade level.

Resources

- 1. Common Core Standards – www.corestandards.org
- 2. Van de Walle, J. A. (2007). *Elementary and middle school mathematics: Teaching developmentally*. Boston, MA: Pearson Education Inc.
- 3. Caldwell, J. H. (2011). *Developing essential understanding of addition and subtraction for teaching mathematics in prekindergarten-grade 2*. Reston, VA: National Council of Teachers of Mathematics.